

## ABSTRACT

There is provided an evaluation apparatus capable of measuring the I-V characteristic in the MOSFET AC operation with a high accuracy. There are also provided a circuit design method and a circuit design system used for the evaluation apparatus. In the evaluation apparatus (1), an AC input signal superimposing circuit (11) applies DC voltage to the MOSFET gate • source • drain • substrate and superimposes an AC input signal of very small voltage on the gate. An AC component measurement circuit (12) measures an AC component of the current flowing between the source and the drain at that time. A mutual conductance calculation circuit (13) compares the amplitude of the AC component of the current with the amplitude of the AC input signal and calculates, from this ratio, the mutual conductance in the frequency of the AC input signal of the MOSFET.